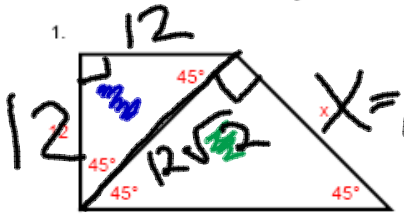
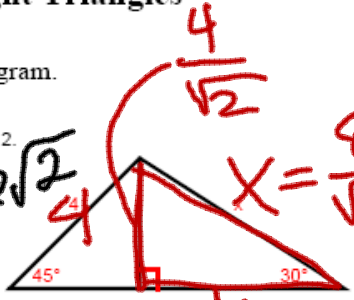
Worksheet 6.3: Special Right Triangles

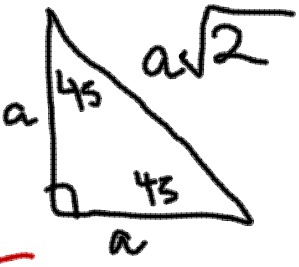
Find the values of x and y in each diagram.

1.

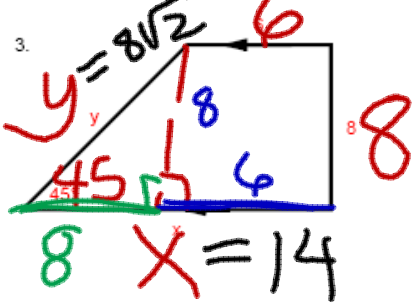


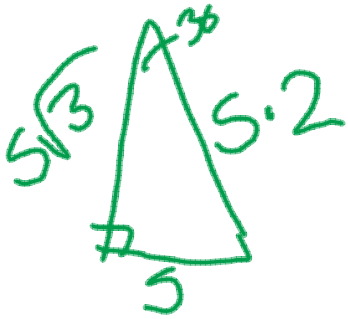
2.



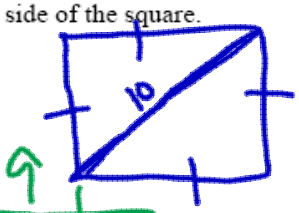


3.

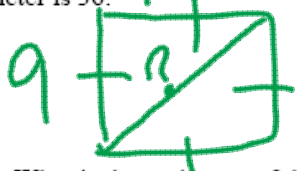




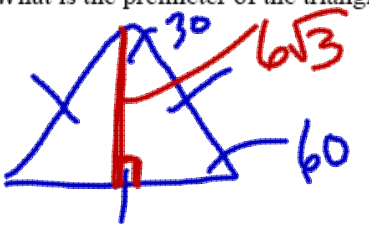
4. The diagonals of a square are 10 units long. Find the length of a side of the square.



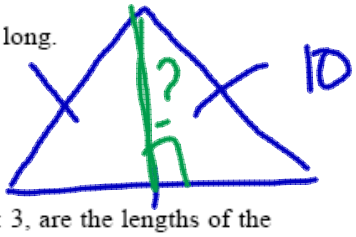
5. Find the length of a diagonal of a square whose perimeter is 36.



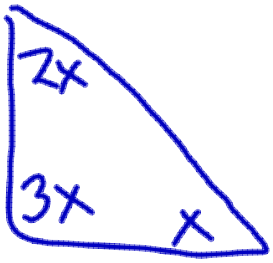
6. An altitude of an equilateral triangle has length $6\sqrt{3}$. What is the perimeter of the triangle.



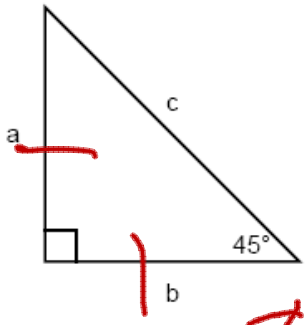
7. Find the altitude of an equilateral triangle if each side is 10 units long.



8. If the measures of the angles of a triangle are in the ratio 1 : 2 : 3, are the lengths of the sides in the same ratio?



Use the figure below to complete the each exercise.

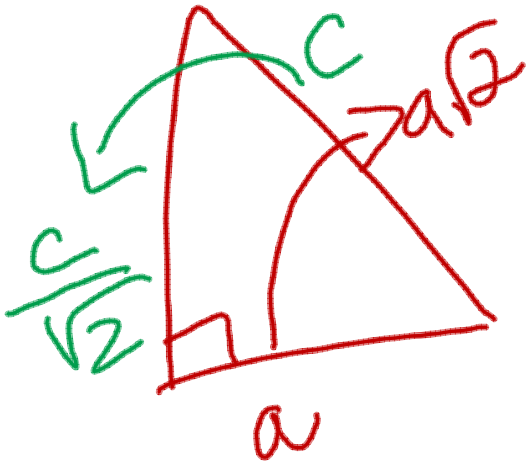


9. If a = 8, then c = $8\sqrt{2}$.

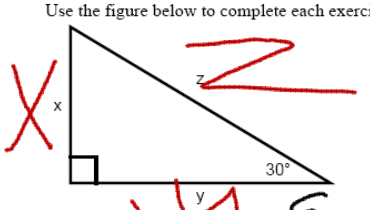
10. If $b = 2\sqrt{3}$, then c = $2\sqrt{6}$.

11. If $c = \sqrt{5}$, then a = $\frac{\sqrt{5}}{\sqrt{2}}$.

12. If c = 12, then b = $\frac{12}{\sqrt{2}}$.



Use the figure below to complete each exercise.

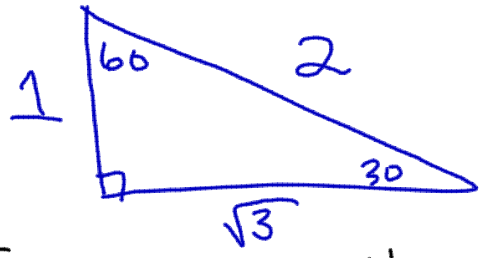


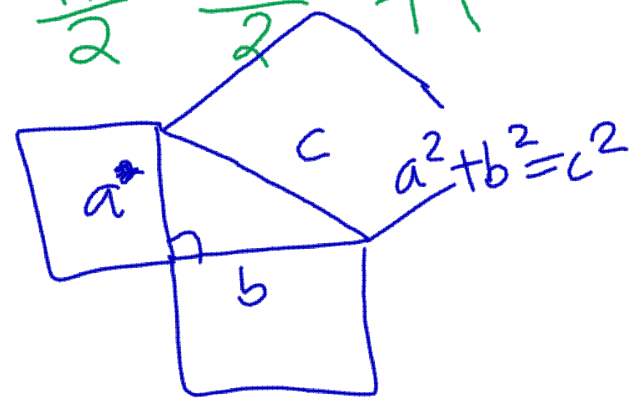
13. If x = 10, then y = $10\sqrt{3}$ and z = 20.

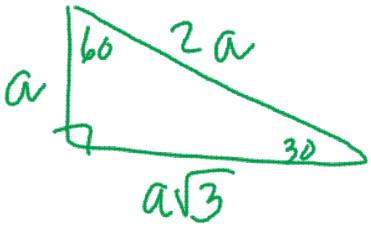
14. If y = 10, then x = $\frac{10}{\sqrt{3}}$ and z = $\frac{20}{\sqrt{3}}$.

15. If z = 12, then x = _____ and y = _____.

16. If z = $4\sqrt{6}$, then x = _____ and y = _____.







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